



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

AF 11/22/06

Applicant: CLARK ET AL. Examiner: I. CARPIO  
Serial No.: 10/714,583 Group Art Unit: 2841  
Filed: NOVEMBER 13, 2003 Docket: 2316.1816US01  
Confirmation No.: 1697 Due Date: DECEMBER 15, 2006  
Title: MODULE WITH INTERCHANGEABLE CARD

CERTIFICATE UNDER 37 CFR 1.8:

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By: Carla J. Catalano  
Name: Carla J. Catalano

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**23552**

PATENT TRADEMARK OFFICE

Sir:

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Merchant & Gould P.C.  
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By: Karen A. Fitzsimmons  
Name: Karen A. Fitzsimmons  
Reg. No.: 50,470  
KFitzsimmons/cjc



N 10/714,583

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	CLARK ET AL.	Examiner:	I. CARPIO
Serial No.:	10/714,583	Group Art Unit:	2841
Filed:	NOVEMBER 13, 2003	Docket No.:	2316.1816US01
Title:	MODULE WITH INTERCHANGEABLE CARD		

CERTIFICATE UNDER 37 CFR 1.8:

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By:

*Carla J. Catalano*

Name: Carla J. Catalano

APPEAL BRIEF

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**23552**

PATENT TRADEMARK OFFICE

Dear Sir:

This Brief is presented in support of the Notice of Appeal filed September 15, 2006 from the rejection of claims 1-19 of the above-identified application, as set forth in the Final Office Action mailed May 26, 2006.

A check for \$500.00 to cover the required fee for filing this Brief is enclosed. Please charge any additional fees or credit overpayment to Merchant & Gould Deposit Account No. 13-2725.

Applicants reserve the right to an oral hearing. A separate request for oral hearing with the appropriate fee will be filed within two months of the Examiner's Answer.

12/11/2006 BABRAHA1 00000071 10714583

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500.00 OP

12/11/2006 BABRAHA1 00000071 10714583

02 FC:1251

120.00 OP

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**I. REAL PARTY IN INTEREST**

The real party in interest is ADC Telecommunications, Inc., located in Eden Prairie, Minnesota, the assignee of record.

## **II. RELATED APPEALS AND INTERFERENCES**

None.

### **III. STATUS OF CLAIMS**

Claims 1-19 are currently pending.

Claims 1-19 are currently rejected.

The rejection of each of claims 1-19 is being appealed.

#### **IV. STATUS OF AMENDMENTS**

An amendment subsequent to the Final Office Action of May 26, 2006 was filed on July 13, 2006 under 37 C.F.R. 1.116. The amendment corrected a grammatical error in dependent claim 19. The Advisory Action mailed August 9, 2006 did not indicate whether or not the amendment had been entered. In a telephone call between Applicants' representative, Karen Fitzsimmons, and the Examiner on December, 1, 2006, the Examiner clarified that the amendment to claim 19 had been entered. The amendment is included in the Claims Appendix on page 17 of this Brief.

## **V. SUMMARY OF THE CLAIMED SUBJECT MATTER**

Independent Claim 1 concerns a patch panel module (18) having a one-piece housing (120) and a module card (122) attached to the housing by a snap-fit connection (140, 142) (spec. page 10, lines 15-23). The one-piece housing (120) has a generally L-shaped construction (e.g., FIGS 7-11) and includes a face plate (124) having a front opening (130) (spec. pages 9-10, lines 27-3). The module card (122) includes a front connector (e.g., 144) positioned adjacent to the front opening, and a rear connector (e.g., 146) located at an end of the module card opposite the front connector.

Independent Claim 8 concerns a patch panel module (18) having a housing (120) that includes a face plate (124) and a housing side (126). The face plate and housing side are oriented generally perpendicular to one another. The patch panel module (18) also includes a module card (122) having a front connector (e.g., 144) and a rear connector (e.g., 146). The module card (122) is secured to the housing (120) by retaining structure. The retaining structure includes a flexible latch (140) formed on the housing side (126) and a hole (142) formed in the module card (122). The flexible latch engages the hole of the module card to provide a snap-fit connection between the housing and the module card.

Independent Claim 13 concerns a method of assembling a patch panel module. The method includes providing a one-piece housing (12) having a generally L-shaped construction and a module card (122); orienting the module card in relation to the housing such that a latch (140) formed on the housing is positioned adjacent to a hole (142) formed in the card; and pressing the module card and housing toward one another to interconnect the latch of the housing with the hole of the card. (See e.g., FIG. 8-10 and spec. page 10, lines 15-23.)



## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

1. Whether claim 8 is unpatentable under 35 U.S.C.103(a) over Harker (U.S. Patent 6,823,475) and Welch et al. (U.S. Patent 5,218,519).
2. Whether claims 1-19 are unpatentable under 35 U.S.C.103(a) over Harris (U.S. Patent 5,546,273) in view of Welch et al. (U.S. Patent 5,218,519).

With regards to grounds #2, in the Final Office Action, the rejection as stated refers to only claims 1-7; however, the Examiner's comments are directed toward claims 1-19. In the telephone call between Applicants' representative, Karen Fitzsimmons, and the Examiner on December 1, 2006, the Examiner stated that the reference to only claims 1-7 was a mistake; and that the rejection applies to claims 1-19.

## VII. ARGUMENT

1. Concerning whether claim 8 is unpatentable under 35 U.S.C.103(a) over Harker (U.S. Patent 6,823,475) and Welch et al. (U.S. Patent 5,218,519).

Welch et al. discloses an I-shaped retainer clip 10 that connects to a circuit board 60. Column 3, line 16. The I-shaped retainer clip 10 includes tabs 22, 26 having raised bosses 28, 30 (FIG. 1). The printed circuit board 60 includes apertures 62, 68 positioned for snap connection with the bosses 28, 30.

Claim 8 recites a patch panel module having a housing including a face plate and a housing side. A module card is secured to the housing by retaining structure. The retaining structure includes a flexible latch formed on the housing side, and a hole formed in the module card.

The Examiner asserts that Welch discloses a patch panel module having a face plate, but points out, however, that Welch does not disclose a patch panel module having a housing side. Nonetheless, the Examiner states that "housing side" is read to be a side where a housing member will be located. In particular, the Examiner states that tabs 22, 26 of Welch, "while connected to the face plate [are] on the housing side since the housing side will be located on that side region perpendicular to the face plate."

To establish a prima facie case of obviousness, the prior art reference must teach or suggest all claim limitations. Claim 8 specifically requires a latch **formed on** a housing side. The Examiner notes that Welch does not have a housing side. Clearly then Welch does not teach or suggest a latch formed on a housing side.

It is impermissible to broaden the disclosure of Welch as the Examiner proposes. Firstly, there simply is no teaching of a housing side in Welch. Secondly, there is no teaching to move the tabs 22, 26 so that the tabs would be **formed on** a housing side, if a housing side were to be placed next to the face plate of Welch. Such a modification is not taught or suggested by Welch and can only be based upon Applicants' own disclosure.

While the Examiner noted that claim 8 is rejected upon Harker and Welch, no reasons for how Harker makes up for the deficiencies of Welch have been provided. It is respectfully submitted that Harker does not, in fact, make up for the deficiencies of Welch, as Harker does not teach or suggest a latch formed on a housing side.

Neither Harker nor Welch teaches or suggests a latch **formed on** a housing side. Because the prior art references fail to teach or suggest all the claim limitations, as required to establish a prima face case for obviousness, Applicants respectfully submit that claim 8 is patentable.

2. Concerning whether claims 1-19 are unpatentable under 35 U.S.C.103(a) over Harris (U.S. Patent 5,546,273) in view of Welch et al. (U.S. Patent 5,218,519).

Harris discloses an amplifier module 160 having a heat sink 162, a circuit card 164, and a face plate 166 (FIGS. 8 and 9). The heat sink 162 includes upper and lower flanges 168 and 170. The heat sink also defines grooves 172, 174 that entrap the circuit card 164 to support the circuit card 164 within the heat sink 162. The face plate 166 is secured to the heat sink 162 using hex-head screws 192.

A. Claims 1-7 and 18

1. **One-piece housing with L-shaped construction**

Claim 1 recites a module including a one-piece housing having a generally L-shaped construction. A module card is attached to the housing.

The card 164 of Harris is entrapped and supported by the heat sink 162. The heat sink 162 is made of extruded aluminum and includes flanges 168 and 170. The heat sink 162 is secured to the face plate 166 by a hex-head screw 192. Because claim 1 requires that the module card be attached to the housing, it is assumed that the Examiner is construing both the heat sink 162, which entraps the card 164, and the face plate 166 as a "housing."

i) Harris fails to teach a housing with an L-shaped construction

The Examiner asserts that Harris discloses a housing having a generally L-shaped construction. It is not clear as to how the heat sink 162 and face plate 166 of Harris define an L-shape. In contrast, it is respectfully submitted that the face plate 166 and the heat sink 162 define a generally rectangular construction, not an L-shaped construction.

ii) Harris fails to teach a one-piece housing

In addition, Harris does not disclose a one-piece housing, as required by claim 1. The heat sink 162 and the face plate 166 of Harris are not one piece. Rather, the heat sink 162 and the face plate 166 are separate components held together by screws 192.

For at least either one of the above reasons, Applicants respectfully submit that claim 1 is patentable. The Examiner utilizes Welch to make up for Harris's deficiency to teach a snap-fit connection. It is respectfully submitted that Welch does not make up for the above-noted deficiencies of Harris, as Welch does not teach or suggest a one-piece housing having an L-shaped construction.

**2. Front connector of module card**

Claim 1 also requires a module card having a front connector. The front connector is positioned adjacent to a front opening of the one-piece housing. The Examiner states that the card 164 of Harris includes a front connector (element 192). Applicants respectfully note that element 192 is a hex-head screw used to fasten the face plate 166 to the heat sink 162. Element 192 is not part of the circuit card 164, as the Examiner has suggested. It is respectfully submitted that a hex-head screw, which holds together the heat sink and face plate, does not meet the structural limitations of a module card having a front connector. Harris simply does not teach or suggest a card having a front connector, as required by claim 1.

In the rejection of claim 1, the Examiner utilizes Welch for only the disclosure of a snap-fit connection. However, because Harris does not teach or suggest a module card having a front connector, as asserted by the Examiner, it is respectfully submitted that a prima facie case for obviousness has not been properly established.

At least for any one of the above reasons, it is respectfully submit that independent claim 1, and dependent claims 2-7 and 18 are patentable.

B. Claims 8-12 and 19

1. **Front connector of module card**

Claim 8 recites a module card having a front connector. The front connector is positioned adjacent to a front opening of a housing. For similar reasons as discussed above with regards to claim 1 (Section 2(A)(2)), it is respectfully submitted that Harris does not teach or suggest a module card having a front connector. Applicants therefore respectfully submitted that claim 8 is patentable.

2. **Retaining structure**

Claim 8 also requires a flexible latch formed on a housing side and a hole formed in a module card, wherein the latch engages the hole to provide a snap-fit connection between the housing and the module card.

The Examiner notes that Harris does not disclose the recited retaining structure but that it would have been obvious to one of skill in the art to combine Welch's snap fit connection with the module of Harris for the purpose of easily securing the card to the housing without the need for extra tools.

i. Welch fails to teach a latch formed on a housing side

To establish a prima facie case of obviousness, the prior art reference must teach or suggest all the claim limitations. Claim 8 specifically requires a latch **formed on** a housing side. The Examiner notes that Welch does not have a housing side. Clearly then Welch does not teach or suggest a latch formed on a housing side. It is impermissible to broaden the disclosure of Welch as the Examiner proposes; i.e., to modify Welch to include a latch **formed on** a housing side, if a housing side were to be placed next to the face plate of Welch. Such a modification is not taught or suggested by Welch and can only be based upon Applicants' own disclosure.

ii. No motivation to combine

Furthermore, there is no motivation to modify Harris to include a snap-fit connection, as the Examiner proposes. The card 164 of Harris is entrapped by the heat sink 162. The Examiner asserts that providing a snap-fit connection will provide easy securing of the card 164 to the heat sink 162 without the need for extra tools. This reasoning is, however, without basis because Harris already discloses an arrangement where no extra tools are needed to entrap the card 164 of Harris

within the heat sink 162. That is, the card 164 of Harris simply slides within grooves formed in the heat sink 162, without the use of tools. The Examiner's motive to modify the heat sink 162 of Harris to include a snap-fit structure can therefore only be derived from Applicants' own disclosure and based upon impermissible hindsight reconstruction.

At least for these reasons, Applicants submit that there is no motivation to modify the heat sink 162 of Harris to include a latch that provides a snap-fit connection, as the Examiner proposes. Accordingly, it is respectfully submitted that claim 8 is patentable.

At least for any one of the above reasons, it is respectfully submit that independent claim 8, and dependent claims 9-12 and 19 are patentable.

C. Claims 13-17

1. **One-piece housing with L-shaped construction**

Claim 13 recites a method of assembling a module including providing a one-piece housing having a generally L-shaped construction. As previously discussed with regards to claim 1 (Section 2(A)(1)), Applicants respectfully note that heat sink 162 and the face plate 166 of Harris are separate components, not a one-piece, L-shaped construction, as required by claim 13. At least for this reason, Applicants respectfully submit that claim 13 is patentable.

2. **Front connector of module card**

Claim 13 also recites providing a module card having a front connector. For similar reasons as discussed with regards to claim 1 (Section 2(A)(2)), Applicants respectfully submit that a hex-head screw, which holds together the heat sink 162 and the face plate 166, does not meet the structural limitations required by claim 13. Therefore, Applicants submit that claim 13 is patentable.

3. **Retaining structure**

Claim 13 further recites orienting the module card in relation to a housing such that a latch formed on the housing is positioned adjacent to a hole formed in the card. For similar reasons as discussed with regards to claim 8 (Section 2(B)(2)(ii)), Applicants respectfully submit that there is

no motivation to modify Harris to include a latch and hole connection as the Examiner proposes; and that such motivation can only be derived from Applicants' own disclosure and based upon impermissible hindsight reconstruction. At least for these reasons, Applicants respectfully submit that claim 13 is patentable.

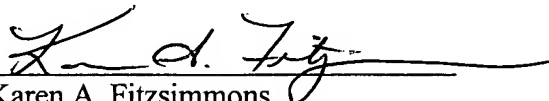
At least for any one of the above reasons, it is respectfully submit that independent claim 13, and dependent claims 14-17 are patentable.

In summary, it is earnestly requested that the Examiner's rejection be reversed, and that all of the pending claims be allowed.

Respectfully submitted,

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Date: December 6, 2006

  
Karen A. Fitzsimmons  
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## **VIII. CLAIMS APPENDIX**

1. A patch panel module, comprising:
  - a) a one-piece housing having a generally L-shaped construction, the one-piece housing including a face plate having a front opening; and
  - b) a module card attached to the housing by a snap-fit connection, the module card including a front connector positioned adjacent to the front opening, and a rear connector located at an end of the module card opposite the front connector.
2. The module of claim 1, further including a securing arrangement for securing the module to a patch panel chassis, the securing arrangement including at least a first flexible tab.
3. The module of claim 1, wherein the L-shaped construction is defined by the face plate and a housing side, the face plate being oriented generally perpendicular to the module card and the housing side being oriented generally parallel to the module card.
4. The module of claim 3, wherein the housing further includes a handle extending outward from the housing side.
5. The module of claim 3, further including an aperture formed between the face plate and the housing side for viewing an LED positioned on the module card.
6. The module of claim 2, wherein the securing arrangement for securing the module to a patch panel chassis further includes a second flexible tab.
7. The module of claim 3, wherein the snap-fit connection includes at least one latch formed on the housing side of the L-shaped construction, the latch being arranged to engage a hole formed in the module card.
8. A patch panel module, comprising:



a) a housing including a face plate and a housing side, the face plate and housing side being oriented generally perpendicular to one another, the face plate including at least one front opening;

b) a module card having a front connector and a rear connector, the front connector being positioned adjacent to the front opening of the housing, the module card being secured to the housing by a retaining structure, the retaining structure including:

i) a flexible latch formed on the housing side; and

ii) a hole formed in the module card;

iii) wherein the flexible latch engages the hole of the module card to provide a snap-fit connection between the housing and the module card.

9. The module of claim 8, further including a securing arrangement for securing the module to a patch panel chassis, the securing arrangement including at least a first flexible tab extending from the housing.

10. The module of claim 8, wherein the housing further includes a handle extending outward from the housing side.

11. The module of claim 8, further including an aperture formed between the face plate and the housing side for viewing an LED positioned on the module card.

12. The module of claim 9, wherein the securing arrangement for securing the module to a patch panel chassis further includes a second flexible tab extending from the housing.

13. A method of assembling a patch panel module, the method comprising the steps of:

a) providing a one-piece housing having a generally L-shaped construction and a module card, the one-piece housing including a face plate with a front opening, the module card including a front connector and a rear connector;

b) orienting the module card in relation to the housing such that a latch formed on the housing is positioned adjacent to a hole formed in the card; and

c) pressing the module card and housing toward one another to interconnect the latch of the housing with the hole of the card.

14. The method of claim 13, wherein the step of orienting the module card includes positioning the front connector of the module card adjacent to the front opening of the housing.

15. The method of claim 13, wherein the step of providing the one-piece housing includes providing a housing side oriented generally perpendicular to the face plate.

16. The method of claim 15, wherein the step of orienting the module card includes orienting the module card in relation to the housing such that a flexible latch formed on the housing side of the housing is positioned adjacent to the hole formed in the card.

17. The method of claim 13, wherein the step of providing the one-piece housing includes providing a one-piece molded housing.

18. The module of claim 1, wherein the one-piece housing is a one-piece molded housing.

19. The module of claim 8, wherein the housing is a one-piece housing, including the face plate and the housing side.

## **IX. EVIDENCE APPENDIX**

### **1. OFFICE ACTIONS AND AMENDMENTS/RESPONSES**

- a. Final Office Action -- mailed May 26, 2006

### **2. REFERENCES RELIED UPON BY THE EXAMINER**

- a. Harker, U.S. Patent No. 6,823,475
- b. Welch et al., U.S. Patent No. 5,218,519
- c. Harris, U.S. Patent No. 5,546,273

The above items are attached and labeled accordingly as Exhibits.

**X. RELATED PROCEEDINGS APPENDIX**

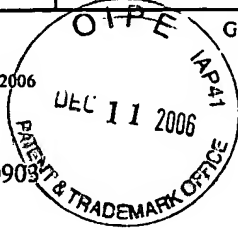
None.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,583	11/13/2003	Gordon Clark	2316.1816US01	1697
23552 7590 05/26/2006				
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P.O. BOX 2903				
MINNEAPOLIS, MN 55402-0903				

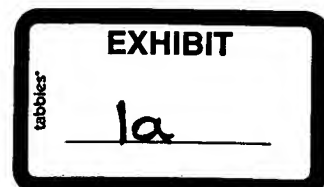


EXAMINER
CARPIO, IVAN HERNAN

ART UNIT	PAPER NUMBER
2841	

DATE MAILED: 05/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.





<b>Office Action Summary</b>	<b>Application No.</b> 10/714,583	<b>Applicant(s)</b> CLARK ET AL.	
	<b>Examiner</b> Ivan H. Carpio	<b>Art Unit</b> 2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 February 2006.  
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-19 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 19 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/19/04 4/12/05  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-7 and 13-14 have been considered but are moot in view of the new ground(s) of rejection. Applicant's argument with respect to claim 8 is that Welch does not disclose a flexible latch formed on the housing side, examiner respectfully disagrees. Claim 8 reads "a flexible latch formed on the housing side", examiner reads housing side to be the side where a housing member is located or will be located, looking at figure 1 we note that the flexible latch while connected to the face plate is on the housing side since the housing will be located on that side region perpendicular to the face plate.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harker and Welch.

With respect to claim 8, Welch discloses a patch panel module comprising: a face plate including at least one front opening (Fig. 1 elements 36, 38), a module card having a front connector (Fig. 1 elements 70, 72) and a rear connector (Fig. 1 elements 74, 76), the front connector being positioned adjacent to the front opening of the

Art Unit: 2841

housing, the module card being secured to the housing by a retaining structure, the retaining structure including: a flexible latch formed on the housing side (Fig. 1 elements 22, 26) ; and a hole formed in the module card (Fig. 1 element 68)., wherein the flexible latch engages the hole of the module card to provide a snap-fit connection between the housing and the module card a module card (Fig. 1 elements 28, 30), however, Welch does not disclose expressly a housing including a face plate and a housing side, the face plate and housing side being oriented generally perpendicular to one another.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (US 5546273) in view of Welch (US 5218519).

With respect to claim 1 Harris teaches a patch panel module, comprising: a) a housing (Fig. 8, element 160) having a generally L-shaped a construction, the housing including a face plate (Fig. 8, element 166) having a front opening; and b) a module card (Fig. 9, element 164) attached to the housing, the module card including a front connector (Fig. 8, element 192) positioned adjacent to the front opening, and a rear connector (Fig. 9, element 182) located at an end of the module card opposite the front connector. Harris does not teach that the module is attached to the housing by a snap-fit connection. Welch teaches a snap fit connection (Fig.1, elements 22 and 26). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Welch's snap fit connection with Harris' patch panel module for the purpose of easily securing the module card to the housing with out the need for extra tools.



With respect to claim 2 and with all the limitations of claim 1, Harris teaches a securing arrangement for securing the module to a patch panel chassis, the securing arrangement including at least a first flexible tab (Fig.9, element 184).

With respect to claim 3 and with all the limitations of claim 1, Harris teaches that the L-shaped construction is defined by the face plate and a housing side (Fig. 8 and 9, element 162), the face plate being oriented generally perpendicular to the module card and the housing side being oriented generally parallel to the module card.

With respect to claim 4 and with all the limitations of claim 3, Harris teaches that the housing further includes a handle (Fig 8, element 194) extending outward from the housing side.

With respect to claim 5 and with all the limitations of claim 3, Harris teaches an aperture formed between the face plate and the housing side for viewing an LED (Fig. 8, element 196) positioned on the module card.

With respect to claim 6 and with all the limitations of claim 2, Harris teaches that the securing arrangement for securing the module to a patch panel chassis further includes a second flexible tab (Fig. 9, element 184).

With respect to claim 7 and with all the limitations of claim 3, Welch teaches that the snap-fit connection includes at least one latch (Fig. 1, element 22 and 26) formed on the housing side of the L-shaped construction, the latch being arranged to engage a hole (Fig. 1, element 62 and 68) formed in the module card.

With respect to claim 8 Harris teaches a patch panel module, comprising: a) a housing including a face plate (Fig. 9, element 166) and a housing side (Fig. 9, element

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162), the face plate and housing side being oriented generally perpendicular to one another, the face plate including at least one front opening; b) a module card having a front connector (Fig. 8, element 192) and a rear connector (Fig. 9, element 182), the front connector being positioned adjacent to the front opening of the housing, the module card being secured to the housing by a retaining structure. Harris doesn't teach that the retaining structure includes: i) a flexible latch formed on the housing side; and ii) a hole formed in the module card; iii) wherein the flexible latch engages the hole of the module card to provide a snap-fit connection between the housing and the module card. Welch teaches a retainer structure containing i) a flexible latch formed on the housing side (Fig. 1, elements 22 and 26); and ii) a hole (Fig. 1, element 62 and 68) formed in the module card; iii) wherein the flexible latch engages the hole of the module card to provide a snap-fit connection between the housing and the module card. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Welch's snap fit connection with Harris' patch panel module for the purpose of easily securing the module card to the housing with out the need for extra tools.

With respect to claim 9 and with all the limitations of claim 8, Harris teaches a securing arrangement for securing the module to a patch panel chassis, the securing arrangement including at least a first flexible tab (Fig. 9, element 184) extending from the housing.

With respect to claim 10 and with all the limitations of claim 8, Harris teaches that the housing further includes a handle (Fig 8, element 194) extending outward from the housing side.

With respect to claim 11 and with all the limitations of claim 8, Harris teaches an aperture formed between the face plate and the housing side for viewing an LED (Fig. 8, element 196) positioned on the module card.

With respect to claim 12 and with all the limitations of claim 9, Harris teaches that the securing arrangement for securing the module to a patch panel chassis further includes a second flexible tab (Fig. 9, element 184).

Regarding method claims 13-16 one skilled in the art would necessarily perform the recited instruction steps for assembling a patch panel module rejected above.

With respect to claims 17 and 18 along with all the limitations of claims 13 and 1 respectively, Harris teaches all of the limitations except does not specifically teach that the one-piece housing is a molded housing. Molding is well known in the art and is used in many aspects for both plastics and metals. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the housing, taught by Harris, be a molded housing because the manufacturing process for molding is well known and efficient.

With respect to claim 19 and with all the limitations of claim 8, Harris teaches that the housing is a one-piece housing (Fig. 9), including the face plate and the housing side.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

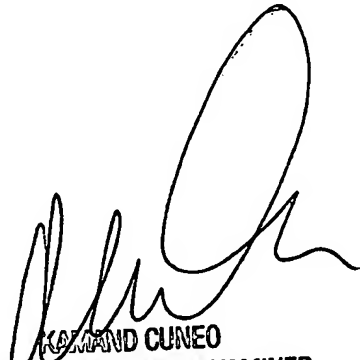
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ivan H. Carpio whose telephone number is 571-272-8396. The examiner can normally be reached on M-R 6:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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